



INFORMATION BRIEF  
ON THE  
DISPOSAL OF PCB  
AND PCB CONTAMINATED  
MATERIALS

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I54  
1976

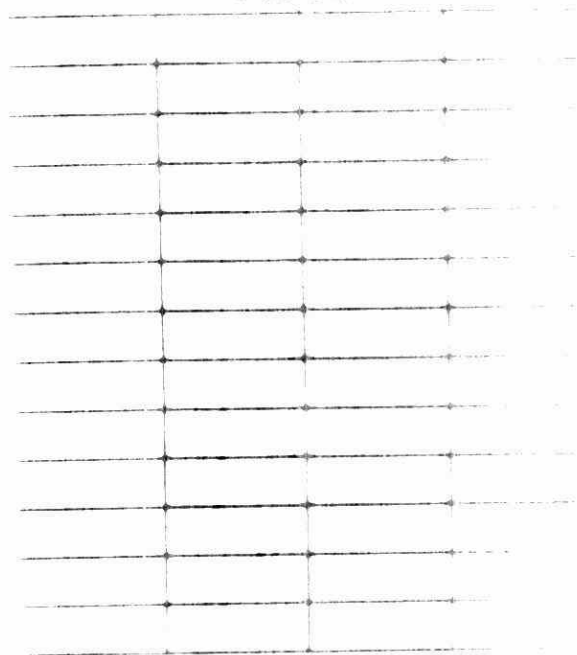


Ministry  
of the  
Environment

The Honourable  
George A. Kerr, Q.C.,  
Minister

Everett Biggs,  
Deputy Minister

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ON THE  
DISPOSAL OF PCB  
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Industrial Section  
Pollution Control Branch  
November, 1976

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## Introduction

It is the policy of the Ministry that all discharges into the environment of persistent hazardous substances such as PCBs be minimized or eliminated.

## Liquid Effluents

Discharges in liquid effluents should be dealt with through normal pollution abatement procedures of inspection, enforcement and licensing of treatment facilities. (Recommended inspection procedures for transformer and capacitor manufacturing plants derived from United States E.P.A. sources have already been sent to Industrial Abatement Managers).

At the present, time there is no recognized method of removing PCB from liquid effluents. PCB in municipal sewerage systems appear to be associated with particulate and, therefore, improved suspended solids control at sewage works may improve PCB removal (which is currently about 50% for most activated sludge plants). Carbon adsorption offers some potential for PCB removal but no hard data is available on this.

Selected mincroorganisms have been identified by researchers at the Canada Centre for Inland Waters which degrade PCB but the rate of degradation is slow and the conditions are difficult to duplicate in the environment

The long-term solution to the PCB problem continues to rest with limitations of its usage in industry and commerce. We still await regulations under The Environmental Contaminants Act. Based on the recommendation of the PCB Task Force, these regulations are likely to permit the continued use as an electrical insulating fluid. However, in the meantime, production of PCB at the Monsanto plant in St. Louis will cease by mid-1977. It remains to be seen whether the importation of PCB for the electrical industry will be permitted and/or which substitute insulating fluids will be adopted by the industry.

#### Air Emissions

Emissions of PCB to air are under investigation by the Air Resources Branch, EPS, Ontario Region, and the Ontario Research Foundation. At the present time, control of sources of PCB discharge to the atmosphere have mainly involved investigation of combustion sources and assessment of levels in air in the vicinity of transformer manufacturing plants.

#### Solid Wastes

Soils contamination resulting from spills and accidents generally involves the disposal of collected

liquid and contaminated soils. At the present time the only approved outlet for contaminated solid wastes such as soils, contaminated scrap electrical equipment, etc., is the Chemtrol disposal facility in Model City, New York. However, transportation costs and other difficulties may preclude the use of this route of disposal in some cases. In these instances, the only alternative is the establishment of some acceptable emergency disposal site in the vicinity of the material to be disposed.

Such a disposal site should meet the following general criteria:

1. It should be on property controlled or owned by the party(ies) responsible for the material to be disposed;
2. The site should be remote from the general access of the public;
3. The site should be isolated from groundwater, surface waters and air-borne loss of PCB. This can be achieved by the establishment of an impermeable barrier under and over the disposed material, such as a clay lining at least three feet thick. It should be noted that no material is available which can be guaranteed to be indefinitely impermeable to PCB. Clay appears to be the most readily

available impermeable material and this is the type of barrier incorporated into the Chemtrol facility; and this facility has been licensed by the United States E.P.A.

4. Groundwater in the vicinity of the site should be monitored before and after deposition of the waste material to assess any migration of PCB from the site.

Under Section 33(b) of The Environmental Protection Act an emergency disposal site may be established, under the authority of the Director of the Approvals Branch, without the mandatory public hearing required under Section 33(a).

In the case of a PCB spill, all appropriate measures should be taken to confine and collect the spilled material and reduce the quantity of contaminated soil or other matter to be disposed. It is essential that such measures be implemented as quickly as possible because PCB has been demonstrated to be quite mobile in soils.

#### Waste Disposal

Liquid PCB wastes must be disposed in combustion equipment capable of destroying the PCB. This involves combustion at high temperatures and residence times. At the



present time, only the Chemtrol facility and the St. Lawrence Cement kiln in Mississauga have been approved for the combustion of liquid PCB.

D & D Disposal Services Limited acts as agent for Chemtrol in Ontario and they may be contacted at:

221 King Street  
St. Catharines, Ontario  
Tel: (416) 688-5569 or 3397

St. Lawrence Cement Company Limited are preparing to enter into similar contract haulage arrangements with a disposal company in Ontario to handle waste liquid chlorinated hydrocarbons. In the interim, enquiries should be directed to:

Mr. C. Coles  
St. Lawrence Cement Company  
Mississauga, Ontario  
Tel: (416) 822-1653

Scrap electrical equipment from Ontario Hydro operations is stockpiled at the Kipling Avenue Surplus Sales Division in Toronto for eventual shipment to Chemtrol. Ontario Hydro are preparing to offer a similar disposal service for municipal public utilities on a fee-for-service basis. More information on this may be obtained from:

Mr. L. Hartman  
Surplus Sales Engineer  
Ontario Hydro  
Tel: (416) 231-4111

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An additional outlet for PCB contaminated solids has recently been identified. This is:

Nuco Chemical Waste Systems  
4626 Royal Avenue  
Niagara Falls, New York

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